

# Phonological Variation in Cirebon Javanese: A Geolinguistic Perspective

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## ABSTRACT

This research examines Cirebon Javanese phonological variation from a geolinguistic perspective, highlighting the lack of in-depth studies on its phonological structure compared to other Javanese dialects. The aim is to delineate and characterise systematic vowel, consonant, elision, and epenthesis variation across geographical and social settings. Using a descriptive qualitative methodology, data were gathered using the Swadesh list from native informants in 267 villages of the Cirebon regency, which comprised a diverse range of social and geographical settings. The data thus obtained were phonetically transcribed and subsequently analysed through a programmed algorithm that sorted phonological differences. The findings demonstrate the presence of systematic vowel shifts (e.g., /a/ → /ə/, /i/ → /e/), consonant alternations (e.g., /b/ ↔ /w/), as well as elision and epenthesis. The above variations are due to internal linguistic factors, such as syllable structure and stress patterns, as well as external sociolinguistic and geographical considerations. The impact is especially marked in the transitional dialect areas with hybrid phonological characteristics due to language contact and social identity dynamics. This study enhances insight into the phonological variation and evolution in multilingual and dialect-diverse areas.

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## 1. INTRODUCTION

Phonological variation is a key field of research within linguistics, concerned with how patterns of sound shift through space, social groupings, and speaking contexts [1]. The variation is even more substantial and socially significant when languages or dialects come into contact in contact zones.

Cirebon, Indonesia, is precisely a language contact zone where Indonesian, Javanese, and Sundanese intersect, making it a rich location to observe these processes. Although

extensive research has been conducted on Javanese phonology in Central and East Java, Cirebon Javanese phonological variation has drawn little scholarly attention [2].

Researchers have generally concentrated on the syntactic or lexical features of Cirebon speech without regard for the systematic phonological variation that marks this variety as distinct from other Javanese dialects. Research on how the vowel and consonant systems of Cirebon Javanese differ from those of standard Javanese, as well as the social and geographical processes underlying such differences, is thus underdeveloped. Earlier work by Labov [3], Chambers and Trudgill [4], and Trask [5] showed that phonological change is frequently correlated with geographical boundaries, social stratification, and syllable structure constraints. However, these models have yet to be explicitly tested for Javanese dialects, especially in the linguistically heterogeneous Cirebon region.

Our research aims to bridge that gap by systematically investigating Cirebon Javanese phonological variation and placing it in a geolinguistic and sociolinguistic context. This article suggests integrating field data elicitation through the Swadesh list, structural and articulatory phonological analysis, and interpretation through geolinguistic mapping. This integrated approach records the variation and accounts for it in terms of internal linguistic processes and external social-geographic pressures.

The novelty of this study lies in its application of geolinguistic theory to Cirebon Javanese phonology, which has implications for the expression of transitional dialect zones through systematic sound variation. This study contributes to the broader field of sociophonetics by illustrating how phonological variables can serve as markers of regional identity and social processes, thereby expanding our general knowledge of language variation and change [6].

## **2. METHOD**

This study employed a descriptive qualitative research approach, framed within a geolinguistic perspective, to document the phonological variation of Cirebon Javanese. The research process was designed chronologically and systematically, comprising four main phases: data collection, transcription, analysis, and mapping. Each phase is described in detail below.

### **2.1 Data Collection**

The primary data were elicited using the Swadesh list, which contains fundamental vocabulary items suitable for cross-linguistic comparison. Native speakers from 267 villages across the Cirebon regency were purposively selected to represent a diversity of social and geographical backgrounds. Individual interviews were conducted with each informant, during which the pronunciations of the target words were elicited, audio-recorded for accuracy, and documented using a 200-item Swadesh questionnaire. This procedure ensured both breadth and depth of phonological data while maintaining reliability.

### **2.2 Transcription and Data Preparation**

All recorded data were transcribed into the International Phonetic Alphabet (IPA) to capture phonetic detail and ensure the accurate representation of sounds. Each word was

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transcribed and verified through multiple repetitions to minimise transcription errors and to account for informal or spontaneous speech phenomena. This rigorous checking process helped to produce a reliable corpus of phonetic data for analysis.

### 2.3 Analysis Procedure

The phonological variation was systematically identified and categorised into four primary types: vowel variation, consonant variation, elision, and epenthesis. The analysis followed a structural-phonetic algorithm, formally described as follows:

#### Algorithm: Phonological Variation Analysis

*Input:* Phonetic transcription dataset D

*Output:* Categorised variation patterns V

1. For each word *www* in D:
  - a. Compare with the standard Javanese pronunciation.
  - b. Identify divergent phonemes.
  - c. Classify each divergence into four categories: vowel variation, consonant variation, elision, or epenthesis.
2. Aggregate the identified patterns across all speakers and geographical locations.
3. Calculate the frequency and plot the spatial distribution of each variation category.
4. Return V

### 2.4 Testing and Validation

The identified variation patterns were evaluated against predictions from the existing geolinguistic and sociophonetic literature [3], [4], [5]. To ensure the naturalness and acceptability of the variants, they were further tested with native informants. The geographical distributions of the variants were mapped using GIS-based tools, enabling the visualisation of regional patterns and the identification of potential transitional zones.

This systematic and temporally structured methodology ensures that the findings are empirically grounded and theoretically robust, providing reliable and nuanced insights into the phonological processes of Cirebon Javanese.

## 3. RESULTS AND DISCUSSION

### 3.1 RESULT

#### 3.1.1 Vowel phoneme variation

Based on the data obtained from 200 Swadesh words, the Cirebon Javanese language found eight types of vowel phoneme variations such as /a/ ~ /ɔ/, /a/ ~ /o/, /i/ ~ /ə/, /i/ ~ /ɛ/, /u/ ~ /ɔ/, /a/ ~ /ɛ/, /ə/ ~ /a/, and /o/ ~ /u/.

##### a. Vowel variation /a/ ~ /ɔ/

The phonological variation of the vowel /a/ ~ /ɔ/ occurs in the final position of the syllable. Both in basic words and derivative forms. Phonetically, the shift from /a/ to /ɔ/ shows the tendency of the open front vowel /a/, where the vowel is pronounced with lips not rounded but spread wide, changing to a semi-closed back vowel /ɔ/ where the vowel is

pronounced with rounded lips. Some examples of words in Cirebon Javanese based on the Swadesh vocabulary are presented in Table 1 below:

Table 1. Phonological variation of /a/ ~ /ɔ/ in Cirebon Javanese Language

No	Standard Word	Variant	Meaning
1.	Apa [a.pa]	Apo [A.pɔ]	What
2.	Boca [bɔ.tʃa]	Boco [bɔ.tʃɔ]	Child
3.	Mega [mɛ.ga]	Mego [mɛ.gɔ]	Clouds
4.	Mama [ma.ma]	Mamo [ma.mɔ]	Mr.
5.	Bapa [ba.pa]	Bapo [ba.pɔ]	Mr.
6.	Mluma [mə'lu.ma]	Mlumo [mə'lu.mɔ]	Lie down
7.	Pira pira [pi.ra 'pi.ra]	Piro piro [pi.rɔ 'pi.rɔ]	Some
8.	Sepira [sə'pi.ra]	Sepiro [sə'pi.rɔ]	Some
9.	Baka [ba.ka]	Bako [ba.kɔ]	If
10.	Teka [tə.ka]	Teko [tə.kɔ]	Come
11.	Ira [i.ra]	Iro [i.rɔ]	You
12.	Uya [u.ya]	Uyo [u.yɔ]	Salt
13.	Tiba [ti.ba]	Tibo [ti.bɔ]	Fall
14.	Kita [ki.ta]	Kito [ki.tɔ]	Me
15.	Tuma [tu.ma]	Tumo [tu.mɔ]	Lice
16.	Segara [sə'ga.ra]	Segaro [sə'ga.rɔ]	Sea
17.	Amba [am.ba]	Ambo [am.bɔ]	Wide
18.	Banta [ban.ta]	Banto [ban.tɔ]	Throw
19.	Lima [li.ma]	Limo [li.mɔ]	Five
20.	Mata [ma.ta]	Mato [ma.tɔ]	Mata
21.	Muta/ Munta [mu.ta/mun.ta]	Muto/Munto [mu.tɔ/ mun.tɔ]	Vomit
22.	Dawa [da.wa]	Dawo [da.wɔ]	Long
23.	Sapa [sa.pa]	Sapo [sa.pɔ]	Who
24.	Lema [le.ma]	Lemo [Le.mɔ]	Land
25.	Ora [o.ra]	Oro [o.rɔ]	No
26.	Tua [tu.wa]	Tuo [tu.wɔ]	Old
27.	Ula [u.la]	Ulo [u.lɔ]	Snake

### b. Vowel Variation /a/ ~ /ɔ/

The vowel variation /a/ ~ /ɔ/ in Cirebon Javanese is a vowel sound change that occurs in the second syllable in a closed syllable. In this study, the vowel change /a/ ~ /ɔ/ is found in the words *kaen* [ka.ən] ~ *kuen* [kɔ.ən] and *golongan kaen* [goloŋan ka.ən] ~ *golongan kuen* [goloŋan kɔ.ən].

### c. Vowel variation /i/ ~ /ə/

The vowel variation /i/ ~ /ə/ is found in certain lexical forms, especially in words with a sound change in the second syllable. This change is found in the word *cindek* [cin.dek] to *cendek* [cən.dək], which means short and the word *isap* [isap] to *isep* [i.səp].

### d. Vowel variation /i/ ~ /ɛ/

The sound variation /i/ ~ /ɛ/ in Cirebon Javanese is a change in the middle position of closed syllables and the final position of open syllables. This change occurs in unrounded

front vowels pronounced with the lips spread wide into semi-open front vowels. In this study, the sound variation /i/ ~ /ɛ/ was found in the word *priben* [pri.ben] to *preben* [prɛ.ben], which means how, with the change occurring in the middle syllable. In addition, it is also found in the word *endi* [ɛn.di] ~ *ende* [ɛn.dɛ], which means where, with the change occurring in the final syllable.

#### e. Vowel variation /u/ ~ /ɔ/

The variation /u/ ~ /ɔ/ in Cirebon Javanese is a change occurring in the closed middle and open final positions. Phonetically, in the vowel /u/, the position of the lips is closed, rounded back, changing to the vowel /ɔ/ with the position of the lip shape rounded semi-open back. Some examples of words in the Cirebon Javanese language based on Swadesh vocabulary that experience the change /u/ ~ /ɔ/ are presented in Table 2 below :

Table 2. Phonological variation of /u/ ~ /ɔ/ in Cirebon Javanese Language

No	Standard Word	Variant	Meaning
1.	Rungu [ru.ɔ u]	Rungo/ rongo [ru.ɔ ɔ]/[ro.ɔ ɔ]	Listen
2.	Gemuyu [ge.mu.yu]	Gemuyo [ge.mu.yɔ]	Laugh
3.	Lamun [la.mun]	Lamon [la.mɔn]	If
4.	Iku [i.ku]	Iko [i.kɔ]	That

#### f. Vowel variation /a/ ~ /ɛ/

The variation /a/ ~ /ɛ/ occurs in closed middle position. In Cirebon Javanese, the variation that changes /a/ ~ /ɛ/ is the word *Busrak* [bus.rak] ~ *Busrek* [bus.rɛk], which means delete and the word *Enggak* [eŋ.gak] ~ *Enggek* [eŋ.gɛk], which means swim.

#### g. Variation /ə/ ~ /a/

The variation /ə/ ~ /a/ is a variation that occurs in the position at the end of the second syllable. In Cirebon Javanese, it is found in the word *bener* [bɛ.nɛr], which becomes *benar* [bɛ.nar].

#### h. Variation /o/ ~ /u/

The variation /o/ ~ /u/ occurs in the middle by repeating the same two vowels. An example of a word that undergoes this change is the word *bosok* [bo.sok], which becomes *rotten* [bu.suk].

### 3.1.2 Consonant Phoneme Variation

Based on 200 swadesh words, 5 types of consonant phoneme variations were found, namely variations of /b/ ~ /w/, /b/ ~ /y/ or /w/, /w/ ~ /b/, /p/ ~ /m/ and /l/ ~ /b/.

#### a. Variation of /b/ ~ /w/

The consonant phoneme change /b/ ~ /w/ is only found in the word *bengi* /beŋi/ ~ *wengi* /wɛŋi/, which means night, where the form /b/ as a voiced soft consonant becomes /w/ as a labiodental semivowel.

### b. Variations of /b/ ~ /y/ or /w/

The variation /b/ ~ /y/ occurs in the closed middle position. The form /b/ in the word *priben* [pri.bɛn] undergoes two consonantal changes, namely the change to /y/, *priyen* [pri.yɛn] and the change to /w/, *priwen* [pri.wɛn].

### c. Variation /w/ ~ /b/

The phoneme change /w/ ~ /b/ occurs in closed middle position and syllable initial position. Examples of words in Cirebon Javanese based on Swadesh vocabulary that experience the change /w/ ~ /b/ are presented in Table 3 below.

Table 3. Phonological variation of /w/ ~ /b/ in Cirebon Javanese Language

No	Standard word	Variant	Meaning	Sound variation
1.	Awu [a.wu]	Abu [a.bu]	Abu	/w/ ~ /b/
2.	Walik [wa.lik]	Balik [ba.lik]	Balik	/w/ ~ /b/
3.	Watu [wa.tu]	Batu [ba.tu]	Batu	/w/ ~ /b/
4.	Wulan [wu.lan]	Month [bu.lan]	Month	/w/ ~ /b/
5.	Wulu [wu.lu]	Bulu [bu.lu]	Bulu	/w/ ~ /b/

### d. Variation of /p/ ~ /m/

The variation /p/ ~ /m/ occurs in the initial position of the syllable. In this study, it is found in the word *pai* [pa.i] to *mai* [ma.i], which means to give and in the word *peres* [pə.rəs] to *meres* [mə.rəs].

### e. Variation /l/ ~ /b/

The variation /l/ ~ /b/ occurs at the beginning of a word or the beginning of a syllable. In this study, the word *luru* [lu.ru] is entered into *buru* [bu.ru] and the word *lintang* [lin.taŋ] into *Bintang* [bin.taŋ].

## 3.1.3 Sound Deletion Variation

In this study, the Cirebon Javanese language also found variations of sound omission in vowel and consonant phonemes.

### a. Vowel Sound Omissions

The omission of vowel sounds in the Cirebon Javanese language occurs in the vowels /ə/ and /u/ as described in Table 4 below:

Table 4. Sound omission variation in the Cirebon Javanese language

No	Standard Word	Variant	Meaning	Sound variation
1.	Endas [ɛn.das]	Ndas [ndas]	Head	Omission of the /ə/ sound
2.	Ende [ɛn.dɛ]	Nde [ndɛ]	Where	Omission of the /e/ sound
3.	Endi [ɛn.di]	Ndi [ndi]	Where	Omission of the /e/ sound
4.	Endog [ɛn.dog]	Ndog [ndog]	Egg	Omission of the /ə/ sound
5.	Uwong [u.wɔŋ]	Wong [wɔŋ]	People	Omission of the sound /u/

### b. Consonant Sound Omissions

The omission of consonant sounds in the Cirebon Javanese language occurs in the consonants /n/ and /k/ as described in Table 5 below:

Table 5. Sound Deletion Variations of Cirebon Javanese Language

No	Standard Word	Variant	Meaning	Sound variation
1.	Kien [ki.ən]	Kie [kiɛ]	This	Omission of the /ən/ sound
2.	Kaen [ka.ən]	Kae [kaɛ]	That	Omission of the /ən/ sound
3.	Kuen [ku.ən]	Kue [kuɛ]	That is	Omission of the /ən/ sound
4.	Emak [emaʔ]	Ema [ema]	Mom	Omission of the /k/ sound

### 3.1.4 Sound Addition Variation

In this study, sound addition variations were only found in consonants in the Cirebon Javanese language. The addition of sounds occurs at the beginning of the syllable, the end of the syllable and the middle position. The examples of the addition of sounds on consonants are presented in Table 6 below:

Table 6. Sound Addition Variation

No	Standard Word	Variant	Meaning	Sound variation
1.	Mili [mi.li]	Milih [mi.lih]	Flow	The addition of the /h/ sound at the end of the syllable
2.	Uya [u.ya]	Uyah [u.yah]	Salt	Addition of the /h/ sound at the end of the syllable
3.	Geni [ge.ni]	Genih [ge.nih]	Fire	Addition of the /h/ sound at the end of a syllable
4.	Ake [a.ke]	Akeh [a.keh]	Many	Addition of the /h/ sound at the end of the syllable
5.	Abu [a.bu]	Abuh [a.buh]	Swollen	Addition of the /h/ sound at the end of a syllable
6.	Geti [ge.ti]	Getih [ge.tih]	Blood	Addition of the /h/ sound at the end of a syllable
7.	Ati [a.ti]	Hati [ha.ti]	Hati	Addition of the /h/ sound at the beginning of the syllable
8.	Utan [u.tan]	Forest [hu.tan]	Forest	Addition of the /h/ sound at the beginning of a syllable
9.	Idu [idu]	Iduh [iduh]	Spit	Addition of the /h/ sound at the end of a syllable
10.	Puti [pu.ti]	White [pu.tih]	White	Addition of the /h/ sound at the end of a syllable
11.	Kabe [ka.be]	Kabeh [ka.beh]	All	Addition of the /h/ sound at the end of a syllable
12.	Weru [we.ru]	Weruh [we.ruh]	Tau	Addition of the /h/ sound at the end of a syllable
13.	Lema [le.ma]	Weak [le.mah]	Land	Addition of the /h/ sound at the end of a syllable
14.	Udel [u.del]	Wudel [wu.del]	Navel	Addition of the /w/ sound at the beginning of a syllable
15.	Taun [taon]	Year [ta.hon]	Year	Addition of the /h/ sound in the middle position
16.	Wedi [wə.di]	Wedhi [wə.dhi]	Fear	Addition of the /h/ sound in the middle position

## 3.2 DISCUSSION

Phonological variations in the Cirebon Javanese language demonstrate complex linguistic dynamics influenced by geographical and social factors. The results of the study reveal four phonological variations in the Cirebon Javanese language: vowel phoneme variation, consonant phoneme variation, sound deletion (elision), and sound addition (epenthesis). Each variation found is analysed within the framework of language variation theory by Labov (1972, 1994, 2010), the dialectology approach of Chambers & Trudgill (2004), and Trask (1996, 2015).

### 3.2.1 Vowel Fonem Variation

Vowel phoneme variation in the Cirebon Javanese language is one of the phonological changes that indicate the relationship between social conditions, geographical region, and the phonotactic structure of the language. From the analysis of Swadesh data, eight types of vowel variation were found: /a/ ~ /ɔ/, /a/ ~ /u/, /i/ ~ /ə/, /i/ ~ /ɛ/, /u/ ~ /ɔ/, /a/ ~ /ɛ/, /ə/ ~ /a/, and /o/ ~ /u/.

One of the most dominant variations found is the change from /a/ to /ɔ/, which generally occurs at the end of open syllables such as the words *apa~apo*, *boca~boco*,

mega~mego, etc. Articulatorily, this reflects a shift from an open front vowel to a semi-closed back vowel with rounded lips. This is known as the process of backing and rounding (Trask [5]).

Additionally, changes such as /i/ to /ə/ in the word *cindek* ~ *cendek* and /i/ to /ɛ/ in the word *priben* ~ *preben* indicate vowel lowering, which often occurs in the second syllable of closed structures. In this case, syllable structure is important in driving vowel sound changes. Referring to Trask [5], explains that:

“Vowel lengthening or shortening is often conditioned by syllable structure. Vowel shifts are frequently triggered by changes in syllable closure or stress patterns.”

Thus, it can be assumed that variations in vowel phonemes such as /i/ ~ /ə/ and /u/ ~ /ɔ/ in Cirebon Javanese stem from phonotactic stress, particularly in closed syllables or in environments with low syllable stress. Closed syllable structures often trigger vowels to become more centralised or open (lowering). Such phenomena align with observations [7] stating that sound change mechanisms exist within the range of normal stylistic variation. Vowel changes in Cirebon occur at the informal or everyday speech level, where the phonological structure of the language is more flexible in response to social and geographical influences. In this context, vowel changes are influenced by socio-cultural conditions and the internal phonological structure of the word undergoing variation.

Furthermore, variations such as /a/ ~ /ɛ/ and /o/ ~ /u/ indicate that phonological processes may also follow vocalisation patterns oriented toward more straightforward pronunciation or alignment with local dialects. Chamber and Trudgill [4] note that such variations also frequently occur in dialect transition zones and can indicate phonological changes gradually moving toward diphthongisation, vowel reduction, or vowel neutralisation.

### 3.2.2 variation in consonant phonemes

Variations in consonants in the Cirebon Javanese language exhibit dynamic changes in sound that are closely tied to local phonetic stress, social influences, and the evolution of the internal phonological system. Based on the results of Swadesh data analysis, five types of consonant phoneme variation were found: /b/ ~ /w/, /b/ ~ /y/ or /w/, /w/ ~ /b/, /p/ ~ /m/, and /l/ ~ /b/.

The sound changes /b/ ~ /w/ and /w/ ~ /b/ indicate substituting voiced bilabial plosive consonants (/b/) and bilabial semivowels (/w/). Examples include the words *bengi* → *wengi* or *awu* → *abu*. Trask [5] explains that semivocalization often emerges as part of a phonological transition strategy reflecting unstable syllable structure. Similarly, according to Labov [3], such segmental variations often serve as markers of ongoing language change.

Furthermore, variations such as /p/ ~ /m/ in words like *pai* ~ *mai* or *peres* ~ *meres* indicate the influence of nasalisation, where the bilabial plosive /p/ is replaced by the bilabial nasal /m/. This can be linked to regressive assimilation in a phonological environment influenced by a nasal context or local articulatory stress. Trask [1], [3], [5] notes that

thanasals often appear as substitutes for plosives in many dialects due to similar articulation pathways, especially in languages with high phonetic interference between syllables. Labov [7] emphasises that using certain phonemic forms in different social classes can indicate linguistic change from below, which initially emerges without the speakers' awareness.

Furthermore, the variation /l/ ~ /b/ in the words *luru* ~ *buru*, *lintang* ~ *bintang* reflects the process of lateral /l/ merging with bilabial /b/, which is a form of metaphonetic substitution that is uncommon in standard language but often found in local speech varieties that experience articulation stress or lateral elision. This change also indicates a form of hypercorrection or phonological adjustment due to language contact, as users of /b/ are more likely to be geographically located in areas with high language contact. Labov [1] mentions that such phonological variations can serve as social indices, where the choice of sound forms reflects educational level, age, and the formality of the speech situation.

Variation in consonant phonemes in Cirebon Javanese cannot be separated from the interaction between the language's internal structure, speech style, and social-external influences. Labov [1], [3] has emphasised that such changes, especially within the context of a speech community, are part of a variation mechanism that functions as a marker of social and geographical identity. Meanwhile, Trask [5] helps explain the phonological processes regarding articulation structure and syllable distribution. Combining these two approaches reinforces that consonant variation in Cirebon is a systematic phonological phenomenon, rather than a mere deviation from the norm.

### 3.2.3 Sound Elimination

The phenomenon of elision in Cirebon Javanese reflects the tendency of speakers to simplify phonological forms in informal or spontaneous speech. In the research data, sound deletion was found both in the vowel /ə/, as in the words *endas* ~ *ndas* and *uwong* ~ *wong*, and in the consonants /n/ and /k/ in the words *emak* ~ *mak* and *kien* ~ *kie*. According to Trask [5], this deletion is an example of phonological reduction. In other words, elision occurs due to the pressure to speed up or simplify pronunciation, especially in vernacular speech contexts. Referring to Labov [3], such variations indicate a pattern of "change from below," meaning language changes that occur unconsciously by speakers or the speaking community. Additionally, the elision of /n/ and /k/ can also be associated with hypology, which is the omission of one of two similar or identical syllables [5].

### 3.2.4 Variation in sound addition (Epenthesis)

Epenthesis is the addition of a segment in the middle of a word [5]. Epenthesis in Cirebon Javanese involves the addition of consonant phonemes, particularly /h/ and /w/, which are found in various positions within words. For example, at the end of syllables such as *uya* ~ *uyah*, *ake* ~ *akeh*, *geti* ~ *getih*, the addition of /h/ can be interpreted as a form of preservation of the final morpheme or as a symptom of hypercorrection [5]. Fuller and Wardhaugh [6] refers to hypercorrection as a form of social reflection on ideal linguistic norms in society.

The addition of sounds to the words *ati-hati* or *taun-tahun* indicates a form of prosthesis, which is the addition of a segment at the beginning of a syllable [5]. This addition

is also a form of interference from Indonesian, especially in the context of formal education or literacy practices that emphasise standard forms. Similarly, adding sounds to the word “udel” to form “wudel” is also a form of prosthesis.

Within the framework of geolinguistics, epenthesis can serve as an indicator of a transitional zone, i.e., an area with mixed phonological forms due to the influence of neighboring dialects or other substrate languages. Chambers and Trudgill [4] state that linguistic characteristics in transition zones reflect the influence of neighboring variations, where certain forms may be added or adapted to accommodate hybrid structures.

Thus, epenthesis in Cirebon Javanese serves as a phonetic function (facilitating pronunciation) and an indicator of language contact dynamics and phonological changes influenced by geographical and socio-cultural factors.

#### 4. CONCLUSION

This study examined phonological variation in Cirebon Javanese through a geolinguistic and sociophonetic lens, identifying systematic patterns of vowel and consonant variation, elision, and epenthesis. The results indicate that internal phonological mechanisms, such as syllable structure and stress, and external factors, including social stratification and geographic distribution, drive these variations. The findings confirm that transitional dialect zones like Cirebon are fertile ground for developing hybrid phonological features shaped by language contact and identity negotiation.

By applying geolinguistic theory to the analysis of Cirebon Javanese, this research offers a novel contribution to understanding how regional and social forces interact to produce distinctive phonological patterns. These insights enhance our comprehension of linguistic variation and change in contact zones, and they suggest avenues for further research on how language dynamics evolve in multilingual settings.

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